

## Information Science & Technology Student/Postdoc Seminar



Tsvi Achler  
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### "Computing, Learning, and Estimating, Under the Inverse"

Wednesday, August 31, 2011  
3:00 - 4:00 PM  
TA-3, Bldg. 1690, Room 102 (CNLS Conference Room)

**Abstract:** The brain has recognition capabilities that remain unmatched by computer algorithms. We hypothesize that recognition centers of the brain reconstruct an internal copy of inputs using knowledge the brain has previously accumulated, in accordance with a class models called "generative models". Subsequently, it minimizes the error between the internal copy and the input from the environment. We study how this strategy may enable a simple, flexible learning strategy, overcome known combinatorial problems associated with pattern mixtures, and display cognitive phenomena.

**Biography:** Tsvi Achler is interested in how the brain uses top-down feedback during recognition. He received Bachelor's degrees from UC Berkeley in Electrical Engineering and Computer Science, Neuroscience. He received an MD and PhD from the University of Illinois at Urbana-Champaign in Neuroscience.